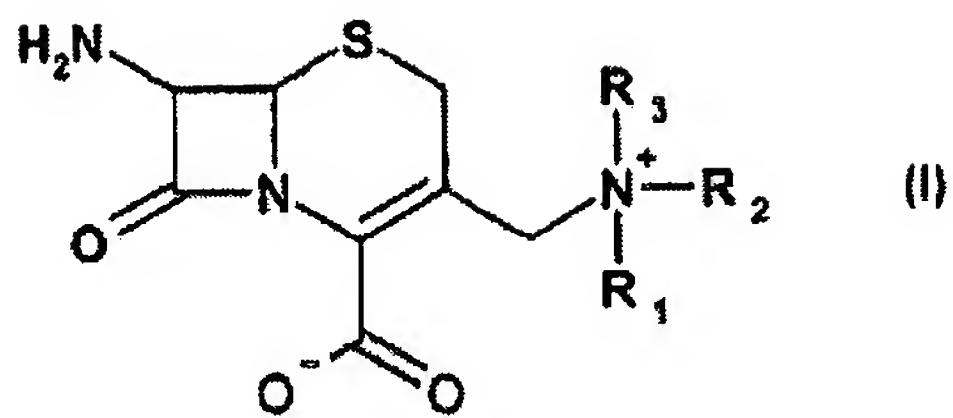


**Abstract**



The invention relates to a new process for the production of intermediates for the synthesis of cephalosporin of formula (I) wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub>, independently of one another, are alkyl, alkenyl, aryl, hydroxy(C<sub>1-6</sub>)alkyl, carbamoyl-(C<sub>1-6</sub>)alkyl, amino-(C<sub>1-6</sub>)alkyl, acylamino-(C<sub>1-6</sub>)alkyl or carboxy(C<sub>1-6</sub>)alkyl, or wherein R<sub>2</sub> and R<sub>3</sub> together with the adjacent nitrogen atom, form an alicyclic 5- to 8-membered heterocyclic ring, and R<sub>1</sub> signifies alkyl, alkenyl or aryl. The process according to the invention is notable in that the formation of undesired by-products, especially  $\Delta$ 2-analogous compounds of formula (I), is greatly reduced.